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NATIONAL POLICY AND ISSUES

ECONOMIC JOURNAL ON IMPROVING ENTERPRISE MANAGEMENT

HK100314 Beijing JINGJI GUANLI [ECONOMIC MANAGEMENT] in Chinese No 6, 15 Jun 81
pp 29-32

[Article by the Chengdu measuring instruments and cutting tool plant: "On Further Improving the Management and Administration of Enterprises in the Course of Readjustment"--slantlines denote boldface type]

[Text] It was in 1979 that our plant first began to expand its autonomy on a trial-point basis. Since then we have enjoyed varying degrees of autonomy in the six different sectors of personnel, finance, resources, supply, production and marketing. The autonomy served as the motive power for us to arouse the enthusiasm of the workers, promote the development of production, enliven our economy and raise our management and operation to a new high level. Over the past 2 years, we have objectively grasped the following:

/1. Enforcement of an economic contract system within plants./

Following the expansion of our autonomy, we enforced an economic contract system within the plant, based on the characteristics of our production operation activities. The contractual requirements specified that the workshops carry-out "four fixes" and "three guarantees," namely, fixed personnel, fixed machine tools, fixed average working hours' remuneration for advanced workers and fixed production time and production quantity; and guaranteed product variety and specifications, guaranteed product quality and quantity and guaranteed profits. The functional section also imposed on the workshops a system of "10 responsibilities." The responsibilities were for: supply of raw materials and subsidiary materials; supply of workshop equipment; repairs and upkeep of equipment; accuracy and completeness of specifications for products; accuracy, completeness and available use of all technological documents; supply of electricity, water, air and gas; suitable deployment of manpower and punctual availability of fixed working hours; timely issuance of production plans and instructions; provision of safety protection equipment and measures; and timely inspection of the production process and final inspection of the product. Awards were also fixed for overfulfillment of contractual tasks; while for failure to fulfill contractual tasks, penalties according to a fixed schedule are made and those responsible for heavy economic losses are severely punished. These measures ensure the smooth fulfillment of contractual obligations.

The implementation of the economic contract system within plants had changed the administrative relations and service relations between the sections or offices and the workshops and between the supplementary workshop and principal production workshop into economic relations. It has strengthened the sense of responsibility on the part of the workshops, sections and offices of the plant. For example, in the past when there was some trouble with the supply of electricity to the production sector, it could be left unattended to for some time even though the cause was one arising within the plant. But with the economic contract system within plants in force, the rule is that any such incident should be settled within half an hour. Even if the cause is an external one and cannot be fixed immediately, some measure must be brought up to deal with it, otherwise the party concerned will have to bear the economic responsibility. This has forced the plant's motive-power section to be constantly on the watch over the electricity supply system, frequently inspecting it and keeping it in good repair. In the case of trouble, it is attended to at once irrespective of the weather conditions. In this way, the implementation of the economic contract system within plants means the simplification of the procedure of control on the part of the plant's principal administrative section. On the one hand, the workshops are responsible for the economic effects of their operations and on the other hand the functional section or office must provide the necessary production conditions for the workshops. The responsibilities of both sides are clearly marked and there is a basis for making either penalties or awards. In turn, the planned character and serene nature of the economic work of the enterprises is augmented, the efficiency of production organization work is raised, and the normal progress and development of production is ensured.

/2. Implementation of an internal economic accounting system and formulation methods of distribution in accordance with reality./

The workshop is the basic unit for the organization of production within an enterprise. In enforcing relatively independent economic accounting methods in the workshops, sections and offices, we have closely knitted together the relationship between the workshop's authority, responsibility and profits and the economic effect and this in turn has aroused the enthusiasm of the workshop and strengthened the management and operation of the enterprise. The independent accounting in our workshops, sections and offices is carried out under the principles of a unified plan, unified fixed quotas, unified prices, unified tax rates and profits, and a unified method applicable to the plant as a whole. 1) All products of the workshops, sections and offices are regarded as commodities for which accounting and planning of one's own profits and losses is carried out. 2) Business transactions within the plant are settled or transferred as normal debit or credit entries in accordance with the internally planned prices. 3) The former practice of charging losses due to stockpiling and extravagance to the gross production cost has been changed to hold the workshops, sections and offices individually responsible. Losses arising out of rejection due to quality problems are charged to the production cost of the production workshop. 4) Fixed assets and circulation capital used by the workshops, sections and offices are all treated as compensatory, or uses requiring compensation. Thus, to make the workshops, sections and offices strengthen control of their funds and to avoid state funds lying idle or being wasted, the rule is that the workshops, sections and offices should pay

to the plant a "tax levy" on the use of the fixed assets and also pay interest on the circulation funds held (2.1 per mill within the norm; 4.2 per mill above the norm; and 8.4 per mill for withholding or allowing an excessive amount to lie idle). In this way, the departments concerned are forced to make effective use of the equipment and funds and curtail their withholding or waste of funds.

The implementation of independent accounting has produced clear-cut economic results. Take, for example, the case of equipment sealed for safekeeping and reducing expenditure. In 1979, the value of equipment sealed for safekeeping was 1.88 million yuan whereas in 1980 it was found to have reached 2.18 million yuan. In former years, external printing expenses had amounted to 80,000 to 90,000 yuan a year but in 1980 the actual amount expended on them was only 10,000 yuan. In order to strengthen the accounting of the workshops' production results and to ensure the marketability of the products, we enforce the ruling that the value of products of which there is a glut produced by the workshops outside the plant's plan should not be counted but the production cost should be counted and in addition that the workshops should bear the economic burden for any stockpiling or funds that lie idle on account of this phase of the output. An interest payment of 4.2 per mill is charged for withholding funds from use and additionally a management fee must be paid. The purpose of this is to make two workshops refrain from engaging in production blindly and make them pay due attention to the requirements of the market. In the past, the supplementary workshop bore no economic burden for the production of rejects and the production cost of such rejects was lumped on the production workshop. Economic accounting now rules that each must take care of its accounts separately and each must bear its own economic responsibility. This has forced the supplementary workshops to strengthen their management and control, to pay due attention to the quality of the products, and to do their utmost not to turn out rejects or substandard products.

To enable the rigid enforcement of economic accounting, we have also provided the workshops, sections and offices with certain economic power. This gives the workshops (sections and offices) the power, on the logical premise of first ensuring the fulfillment of the plant's entire plan and subject to the approval of the production section, based on the demands of the market, to organize the production of additional products or to offer labor and services to society. With regard to the newly added and marketable products, the workshops are entitled to retain within a specified period a rather high proportion of the gross profits as a foundation fund for future development of production. The workshops are given the authority to determine the distribution of the foundation fund. In addition to distributing it to their various sections or directly to the workers on the basis of the conditions upon inspection of the fulfillment of the targets, they have the authority to retain a small portion of the funds to serve as special awards or as subsidies to the employees and workers in need.

Based on the independent economic accounting provisions for the workshops, sections and offices, regulations covering the conferment of awards have been formulated. In 1979 we adopted the method of distributing the award funds which were made up of the "basic awards" plus an award for exceeding the planned profits. This method was meant to make use of economic benefits to eradicate the past one-sided trend of simply seeking value and quantity in production, disregarding the waste of raw materials, and disregarding the economic effect. At the same time,

the good or bad performance in the management and operation of the workshops directly influenced the amount of funds available for making awards. In 1980, we took a step further to improve the method of distribution and adopted one calling for the percentile distribution or retention of a percentage of the gross profits from each month's production from the production workshops; the supplementary workshop can retain a percentage of the gross amount of reductions on the production cost; while the functional section or office can set aside funds for a sinking fund on the basis of the gross amount of profits from the sales volume of the current month. To solve the contradiction arising out of the failure to abide by the principle of more work more pay due to the fact that prices do not always coincide with actual value, we have adopted remedial measures which, when determining the percentage ratios due to the various workshops, take into account the requirements of society and the actual benefits received by the workshops. In addition, concerning cases in which changes in the structure of commodities has brought about diminishing sales and considerable reductions in profits in comparison with usual practice in the past, the workshops concerned are given some form of compensation in respect of their products which are in short supply subject to the provision that this has no effect on the gross sinking fund available for distribution. Moreover, in business accounting this year an item under the heading of working hours has been added. This has helped to solve the problem of disparity of joy and hardship in the percentile distribution or retention. It makes the distribution of the benefits more rational.

/3. Firmly implement the party's policies and arouse the enthusiasm of all types of personnel./

Following the expansion of autonomy, enterprises have a certain amount of power concerning the appointment or dismissal of personnel. Over the past few years, we have exercised this power in connection with the appointment and dismissal of our middle level cadres. We have selected a batch of young and healthy people to fill the posts of cadres of middle level or above. The original team of leadership cadres of middle-level or above has been reshuffled and replenished. In particular, we have made special efforts to appoint engineering and technological personnel who are good in organization and leadership work to fill leadership posts at various levels and encourage them to give full play to their talents. The selection of young and strong engineering and technological personnel to strengthen the leadership circle produced the effect of arousing the enthusiasm of the engineering and technological personnel, making the team of cadres young and energetic, specialized, intelligent and well informed, and promoting technological renovation and technological restructuring work in the enterprise.

/4. Cultivating the operational ideology and opening up wide the road to production and marketing./

Following the expansion of autonomy, it is obvious that with the increase of revenue to the state as a prerequisite, whether or not it is possible for the group to be more benefitted and the individual to receive more income depends entirely on whether more profit can be made which in turn depends on increased production and increased sales. In 1979, production orders from the state

amounted to only 16 million yuan, or roughly 30 percent of the gross value of the plant's annual output. In 1980, these orders amounted to only 18.5 million yuan, or 38 percent of the gross value of the plant's annual output. This year, there were no such orders from the state at all. As a matter of fact, with the economic readjustment work in progress, the whole machine building industry is short of production orders.

For our part, there is now a glut of many of our major products which we can produce on a large-scale basis. But what the market actually needs is products that are in short supply. Our production of this category of products is small and besides, the required skills to produce them are rather complicated while the production cost is high. Moreover, with regard to the sale of these products competition from our contemporaries is keen. However, on account of our expansion of autonomy, we have taken up the burden of looking out for our own interests. We have decided on the policy of shaping production according to market demand. For example, the workshop turning out percentage meters has found that the market cannot absorb more of this product and its sales have slackened. Accordingly, it has turned to producing new products which its present equipment and technology can easily handle, such as tools for measuring the changes in position of the ceilings of mining tunnels, measuring tools for wheels of railway wagons, leather meters and so on. The workshop making drills and screws has boldly reformed its skills, readjusted the load capacity of its equipment, and is turning out hand-operated drills in quantity and has managed to change losses into profits in the manufacture of this item. This has fulfilled market needs and the workshop has found a way out even in the face of severe competition. Some of the workshops have learned the special needs of certain users and have undertaken to turn out special products complying with the customers' specifications. Some workshops even go so far as to produce goods at the customer's request, goods which provide a slim profit margin but involve a high labor cost. In sales and marketing, we pay special attention to making market forecasts. We augment our sales services and build up special sales relationships. We hold sales sessions to solicit orders and engage in much sales propaganda work for the products, in an endeavor to promote direct sales by ourselves. To increase the competitiveness of our products, we have reinforced the work on quality control. In the manufacturing process, starting from the receipt of the raw materials and ending with the end-products coming onto the market, each and every step on procedure is subject to rigorous quality control, and very commendable results have been achieved. For example, our straight-handle twist drill bit and percentage measuring meters have been awarded by the state with a gold badge and a silver badge respectively, while six of our major products have been acknowledged by the First Ministry of Machine Building as "products of reliable quality." This year, altogether 12 varieties with some 190 specifications of products have been sold to some 10 countries and areas in America and Europe. The gross value of the volume of sales reached 10.3 million yuan. Since the expansion of our autonomy, despite the steadily diminishing orders from the state, our direct sales have been steadily increasing. Last year, not only were all the products that year sold out but also some 2 million yuan worth of quality products which had been stockpiled in the warehouses were sold.

/5. Tap potential, renovate and restructure, and expand the production capacity of products in short supply./

What is stated below also illustrates the motivation provided to us by the expansion of our autonomy. Over the past 2 years, we have made use of the financial power

and material resources derived from this source to newly build a workshop and an oxygen and nitrogen chemical section which have greatly helped to improve the quality of our products. We have also expanded the workshop for making straight-handle drill bits and taper-handle drill bits and the area of the compound for making gauge blocks. The cost of expanding the workshop for making the straight-handle drill bits reached nearly 600,000 yuan, but the production capacity of the workshop was thus increased from 18 million sets originally to 30 million sets now. At an average profit margin of 0.19 yuan per set, the entire investment cost can be recovered within half a year, if the production capacity develops normally. In addition, we have taken note of the actual market needs, tapped our production potential and increased the output of products which were in short supply. For example, last year we put into production articles which had been scantily produced before such as broad-angle squares, standard-angle squares, lever micrometers of 1/1000th scale, and lever micrometer callipers. We also actively trial-produced other new products and improved on certain old and established products.

/6. Strengthen political and ideological work and correctly handle the three "three-in-one combinations."/

After the expansion of our autonomy, in addition to making use of material benefits to arouse the enthusiasm of each unit and the staff and workers of the plant, we have also laid special emphasis on political and ideological work for each person and taken political and ideological work as an important constituent part of enterprise management which must be knitted together with modernized production. Since the expansion of our autonomy, we have started to arouse the enthusiasm of the individual and in ideological education, we have paid special attention to correctly handling the relations between the three "three-in-one combinations," namely, 1) relations between economic measures, political work and administrative measures; 2) relations between power, responsibility and benefit; and 3) relationships between the state, the collective and the individual. We believe that the expansion of enterprise autonomy is an economic measure to arouse the enthusiasm of the people, but an economic measure cannot replace political and ideological work or the necessary administrative control. Hence, while firmly insisting on the principle of material benefits, we simultaneously emphasize the full display of the demeanor of communism and have organized a labor production emulation campaign for the entire plant and also an eight-team competition among the sections and offices. We urge making contributions to the four modernization and by means of public appraisal, have chosen pacesetters to pursue this objective. We realize that in strengthening our political and ideological work we should not overlook the need to give the necessary administrative directives otherwise it is not possible to complete the entire task.

In our political and ideological work, we make our staff and workers understand, and correctly assess, the relations of interest between the state, the collective and the individual. After having fixed the tasks for the entire plant this year, we have suggested to the staff the following targets: the profit remittances to the state this year should reach 17 million yuan; the amount retained by the plant should be 3.06 million yuan; and concrete arrangements should be made for the portions available for rewards such as building staff dormitories and collective welfare work. At the same time, it has been strongly pointed out that to achieve

the objective of remitting 17 million yuan to the treasury, the gross value of output should reach 52 million yuan and that to justify a retention of 3.06 million yuan, the profits must reach 17 million yuan. This is to make the staff understand that only when the interests of the state have been taken into account can there be benefits for the collective and for the individual. As for the correct handling of the relations between power, responsibility and benefit, it has been especially emphasized that we should not merely talk about benefit and neglect responsibility but that on the basis of a definite amount of authority, there must first be a sense of responsibility. It has further been stressed that expanding autonomy is not tantamount to increasing monetary income but rather increases responsibility. Accordingly, we have adopted the following principle: that economic benefits are determined by the economic effects while economic effects are in turn determined by economic responsibility. We demand that each and every level should be held responsible and that for each and every job there must be someone responsible.

Summarizing the above, it has been found that under the direct leadership of the provincial and municipal party committees the expansion of our plant's autonomy has progressed relatively smoothly and achieved rather obvious economic results. Take for example the profit remittances to the treasury. In 1978, before the expansion of our autonomy, our profit remittances to the treasury amounted to 13.5 million yuan. In 1979, the year when the autonomy of our plant was first expanded, it rose to 17 million yuan, a net increase of 3.5 million yuan. In 1980, the readjustment of the national economy was in progress and as a result the whole machine building industry was in a state of "operating below capacity," but because of the expansion of autonomy, the profits were still found to be 14.5 million yuan, a net increase of 1 million yuan over 1978 when the expansion of autonomy had not yet been implemented. These statistics clearly indicate that the expansion of the plant's autonomy has brought about new changes in the management and operation of the enterprise. It has instilled new vitality into the enterprise unit and helped the enterprise to raise its economic efficiency. Great prospects for future development are thus envisaged.

Nevertheless, a review of the work on expansion of autonomy conducted over the past 2 years has revealed the emergence of many problems. Some of these problems have arisen because ideologically we have fallen behind and because while even better results could have been reaped, we have failed to realize them. More importantly, objectively speaking, certain regulations at present are restricting the fruitful results of the expansion of autonomy. If these problems are not solved then the reform of the economic structure cannot be penetratingly carried out and effects of the expansion of autonomy cannot be augmented or attain great development.

In order to push further the expansion of enterprise autonomy, first of all we should further arouse the enthusiasm of the people. We should provide the enterprises with more of the necessary power of handling personnel. They must be given greater authority on such matters as staff remuneration, appointment and dismissal.

Originally, the expansion of autonomy concerned profit distribution (percentile retention of profits) and what principally affected the individual was the matter

of awards. But speaking from the standpoint of material measures, depending on making awards alone is not sufficient. As a matter of fact, at present, due to the combination of various factors, enterprises which have produced good economic results are not necessarily in a better position in the matter of awards than those enterprises which have produced good economic results are not necessarily in a better position in the matter of awards than those enterprises which have put on a poor performance. Moreover, the state has enforced certain regulations covering awards with the result that the distribution of awards has tended to become more or less equalized.

In our opinion, to solve this problem we should endeavor to allow the scale of salary and wages to reflect the caliber of the management and operation of an enterprise and the economic effect. Unfortunately, the present system of the state exercising unified control over salaries and wages is out of joint with, and even runs contrary to the operating conditions of an enterprise. If an enterprise has the power to determine the increase or decrease in the salary and wages of the staff members, then it will be possible to make better use of material benefits to arouse the enthusiasm of the individual. It will also be possible to greatly increase work efficiency and eradicate such phenomena as overstaffing and irresponsibility.

An enterprise must also have the power to cut down redundant personnel, as a measure to increase its economic effect. At present, the enterprises appear to have a rather large number of redundant personnel whose existence objectively speaking restricts the raising of the labor efficiency rate. Naturally, suitable arrangements must be made for those personnel relieved of their posts and we should be careful not to create any serious social problems in this connection.

Second, from the macroscopic point of view we must now endeavor to strengthen the leadership work over the autonomy of enterprises and through the adoption of a sound economic policy determine which type of enterprise to support and which to restrict. We must refrain from the former practice of the departments in control making all the concrete production plans for the enterprise units. In our opinion, with the expansion of autonomy on the part of the enterprises, more rigid and higher demands must be made of the departments in control. Perhaps it may be appropriate to describe the work expected of them with the following words: "service, overall planning, coordination and supervision."

Third, an economic ordinance must be formulated and also concrete policies and measures must be formulated which are in line with the guiding principles. Concretely speaking, 1) A unified statute (basic law) covering industry must be instituted. The establishment of a plant must strictly abide by existing laws and regulations. Violations should be prosecuted by law. 2) With regard to which products are to be promoted and which are to be restricted, we should so regulate them by means of price variations. Economically, we should restrict the production of goods the sales of which are stagnant and that will ultimately be stockpiled. For the blind production of goods resulting in economic losses, the responsible persons must bear the economic burden. 3) The quality standards of the products must be strictly implemented. There should be no production of goods whose quality is not up to specifications and any such goods produced

should not be put on sale. Enterprises turning out sub-standard goods should bear the economic responsibility for them. 4) The use of funds must be kept under strict control. Banks must be allowed to exercise their power of independently supervising and controlling the use of funds. They should have the power to stop further loans to, or impose heavy interest rate on, enterprises which have retained for their own use funds in excess of the limit. 5) A law of contracts must be instituted. All enterprises and government industrial departments must be governed by this law of contracts and bear the relevant economic responsibility.

By means of economic legislation and appropriate economic measures, we can avoid all unnecessary interference and place the enterprises truly in the position of relatively independent producers of commodities, and make them treasure such a position for the sake of their own interests. In this way, the state will be able to smoothly make the enterprises obedient to the central task of readjustment and to enable the reform of the economic structure to progress smoothly.

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FINANCE AND BANKING

ROLE OF FINANCE, TAX SPECIALISTS IN CHANGING ECONOMIC SYSTEM OUTLINED

Beijing CAIZHENG [FINANCE] in Chinese No 7, 5 Jul 81 pp 31-32, 12

[Article by Bao Youde [7637 0645 1795], Pei Shian [5952 0013 1344]; "Our Views on the Real Duty of Finance and Tax Specialists in the New Situation"]

[Text] What is the real duty of finance and tax specialists? This is a controversial issue that has not been settled over the past 20 years and more since the start of state-private ownership. With a view to adapting ourselves to the new circumstances, we have held many discussions since last year on the real duty to be performed by finance and tax specialists in the new circumstances. Some say they should concentrate their energy on "supporting, helping and promoting." Others think their real duty should consist in "inspecting, supervising, and collecting." Still others advocate playing an all-round role and alternating "supporting, helping, and promoting" with "inspecting, supervising and collecting." Below we set forth our fairly concentrated views for discussion with our comrades.

1. What are the new circumstances confronting the financial and taxation work?

Along with further implementation of the 8-character policy centered on readjustment of the national economy, many new problems and new circumstances have arisen in financial and taxation work. As far as the textile and instruments-meters industries covered by the second Shanghai tax sub-bureau are concerned, three main changes have taken place: (1) In the economic system, there have appeared industrial companies, combined industrial-commercial enterprises, jointly operated industrial-agricultural enterprises, jointly operated state-collective enterprises, workshops at state-run plants separated into collectives, and the new economic form of joint Chinese-foreign ventures now being negotiated. (2) Change in the mode of operation. Operation of enterprises has branched out into following lines: processing imported materials, developing compensation trade, setting up sales departments of industrial enterprises, charging technical aids to other enterprises under regional cooperation plans, and expanding floating prices and self-fixed prices among prices of plant products. Instruments and meters enterprises have carried out internal adjustment of prices. (3) Change in the financial system. Five branches of the instruments and meters industries have put into effect the system under which they retain a portion of their profits. Excepting the above-mentioned enterprises which account for 85 percent of total number and 90 percent of the financial resources, and which have put into effect the system of profit retention, all the other enterprises have put into effect an enterprise fund system.

All the above changes boil down to one point: gradual expansion of enterprises' power of self-management. The relationship between enterprises which deliver profits to the higher authorities and the state finance which allocate funds is undergoing changes. Although such changes have just begun, tax collectors are already confronted with a contradiction between enterprises and state financial departments fighting for profits. Some enterprises which want to retain more profits and grant more bonuses devise ways and means to put into production cost the expenses that should be defrayed out of their retained profits, and keep sending more and more applications for tax deduction and exemption so as to increase their profits. They invent all kinds of names as pretexts for "squeezing tax and digging up profit." If tax and finance personnel disregard these changed circumstances and cling to the old notion that "the meat is in the pot anyway," it would be difficult for them to bring into the treasury the full amount of profit tax that should be collected.

Circumstances are forcing us to ponder seriously over what is the duty-bound job to be done by tax and finance personnel and what should be done by enterprises and the competent departments without its being monopolized by the tax and finance personnel. In this respect, if we face the reality and seriously look back on the past, then we shall find it not difficult to settle the question--what is the duty of tax and finance personnel--that has been discussed for some 20 years.

2. Our understanding about the guiding thought underlying the duty of tax and finance personnel in the new situation.

We think that in the new situation the guiding thought underlying the duty of tax and finance personnel is to achieve the four modernizations. For the present, they should serve the purpose of implementing the readjustment policy in their work, and adhere to the socialist direction, and acquire a political viewpoint, production viewpoint and mass viewpoint. They should strengthen financial supervision, promptly bring taxes on profits into the treasury in full amount, and contribute their part to eliminating financial deficits. In this respect, we must observe the principle that economics determines finance and finance in turn reacts on economics, promote production by performing the inherent function of the socialist finance, and serve production.

As to how to apply the inherent function of finance in promoting production and serving production, we think the following points should be grasped: (1) Financial and taxation policies, decrees, and regulations should be formulated in such a way as to benefit the development of production. (2) Budgets of revenue and expenditure should be worked out in such a way as to benefit the development of production and gradual improvement of people's livelihood. (3) In managing finance and taxation, investigation and research should be conducted, experiences summed up, and the development of production more effectively stimulated. (4) Enterprises should be urged to keep raising their business accounting level. (5) Financial and taxation policies and decrees should be applied in strengthening financial supervision and combating violation of financial discipline. The objective is to insure implementation of financial policies and fulfillment of the financial tasks.

In short, the real duty of finance and tax personnel may be clearly divided into three main points: (1) Determine a starting-point--everything for the four modernizations. (2) Establish a foothold--basing themselves on their real duty and playing their role by performing the inherent function of finance. (3) Determine the end-result--striving for fulfillment and overfulfillment of the revenue targets.

3. Our concrete views on the real duty of tax and finance personnel.

As the saying goes, "The gong beater and the candy pedlar each has his own trade." Not to define clear-cut duty requirements that can be checked and examined is to deny the necessity of social division of labor. We maintain that the job requirements to be met by tax and finance personnel are to do a good job in two spheres: "raising funds" and "reflecting supervision." In other words, they are required to do a good job in "three checks, two management's, and one-collection."

"Three checks" means "inspection, examination and investigation." (1) In accordance with state financial policies and decrees, they should exercise supervision and carry out inspection with regard to enterprises. Such is the duty-bound task of tax and finance personnel, a task no other department can perform on their behalf. They should inspect whether profit tax is fully and promptly paid, how the financial discipline and system are implemented, and how various types of funds are managed and used. (2) Where necessary, they should examine how enterprises deliver profits to the higher authorities and receive allocations from the higher authorities. This is an important link in exercising financial supervision and guarding the financial pass. With enterprise power expanded, more and more things are appearing that require certification, affixing of seals, and declaration of intention by the financial authorities. Moreover, all these things involve the interests of the state, enterprises, and workers. Therefore, inspectors are increasingly required to follow policy and meet work requirements more thoroughly. What should be inspected includes the following: Applications for deduction and exemption of tax payments, compensation for losses, write-off of property, compensation-loss allocations and transfers, retention of profits, loans, repayment of loans, as well as enterprise projection of financial costs, and various accounting tables and reports. (3) They should regularly investigate and study the new circumstances and new problems arising from changes in the financial source and from economic growth, so as to keep themselves informed of the circumstances, follow the trends, study measures and reflect developments promptly.

"Two-management's" means, internally, managing taxation and, externally, supervising and urging enterprises to strengthen their financial management. Emphasis should be laid on the former. Internally, management of day-to-day taxation work should be strengthened, normal work order established and perfected and the necessary foundation work overhauled and strengthened to supervise tax payers. In practice, we are of the opinion the day-by-day management of taxation may be concretely divided into ten items: "collection of tax payment, supervision over delivery of profits, projection of income, deduction and exemption of tax payment, return of income to treasury, examination of tables and reports, check-up on finance and taxation, handling of vouchers and receipts, making notes on handbook, asking for instructions and submitting reports." It is necessary to guard against tax arrears, delaying of tax payments, and tax omissions, and to insure prompt fulfillment and overfulfillment of the revenue targets. In short, the real duty of tax and finance personnel must have a relative "limit" in scope and a relative "bottom" in requirement. Everything should follow rule and duties incumbent on each should be clearly defined. In so, the enthusiasm of the vast number of tax and finance personnel can be effectively brought into play and our level of management can really be raised.

ENERGY

COAL INDUSTRY MINISTER DISCUSSES ENERGY POLICY

Beijing MEITAN KEXUE JISHU [COAL SCIENCE AND TECHNOLOGY] in Chinese No 4, Apr 81 pp 4-8

[Abridged version of speech by Gao Yangwon [7759 2254 2429], minister of coal industry and deputy chairman, Standing Committee of the State Energy Sources Commission on 20 September 1980: "On the Issue of China's Energy Policy"; place not specified]

[Text] 1. The Energy Source Problem Is Crucial Issue Concerning Our Country's Four Modernizations and Construction

Energy sources are at once an important material basis for the development of the national economy and an important condition for realizing the four modernizations. This is quite clear if we look at the history of the world's economic development and the actual status of China's national economy. In 1978, the gross consumption of the world's nonrenewable energy sources was equivalent to 8.76 billion tons of coal, of which petroleum and natural gas accounted for 65 percent, coal accounted for 32 percent, hydroelectricity and nuclear power accounted for 3 percent, thus constituting an energy sources structure chiefly composed of oil and gas. In 1950, the world's total energy consumption amounted to 2.7 billion tons of coal equivalent, of which coal accounted for 61 percent, petroleum and natural gas accounted for 36.6 percent. The 1973 total energy consumption reached 7.8 billion tons of coal equivalent, of which the proportion of coal dropped to 32 percent, while oil and gas rose to 66 percent. Throughout the 1960's, the mean GNP growth of major industrial nations was 4.5 percent, and Japan's mean GNP growth reached 11.9 percent. By utilizing good and cheap petroleum as their primary source of energy, the major capitalist powers succeeded in bringing about modernization within a very short span of time. After 1973, due to the oil crisis, supply shortage and hiking prices, the major industrial powers generally entered a period of low economic growth; the annual growth tapered off to only approximately 2 percent, and Japan's annual growth also dropped to 5 percent. It is now generally believed in the world that the energy problem centered around petroleum is the gravest problem in the world economy of the 1980's. It follows that economic growth is indeed closely tied to the supply and structure of energy sources. The extensive use of a new type of energy in massive quantities is bound to lead to rapid economic growth; conversely, the entire economic growth will slow down or even come to a standstill.

At present, the worldwide energy crisis indicates that the energy sources problem is at a new turning point. In view of the fact that oil resources can no longer ensure long range needs, every country is seeking new sources of energy which can serve as alternatives. It is generally believed that coal and nuclear power electricity are relatively realistic alternative energy sources. There are great reserves of coal which are widely distributed and not so easily monopolized. The nuclear power technique has already been attested and proven economically reasonable; but it is impossible to replace oil or gas with nuclear power within a short span of time. Thus, the only way is to exploit rationally and utilize coal resources.

Our country's energy sources have undergone 30 years of development, and have formed into a pretty solid foundation. In 1979, China's nonrenewable energy sources reached 630 million tons coal equivalent, which included 635 million tons of raw coal, 106 million tons of petroleum, 14.5 billion cubic meters of natural gas, 50 billion watts of hydroelectricity. But there is still a sharp contradiction between supply and need of energy sources, which has already affected that national economic growth. The main reasons are: First, for a long period of time, too much investment has been put into all heavy industries except energy sources industries, not to mention the low priority given to the construction scale of energy sources, thus resulting in an imbalanced development of energy source industries and energy consuming industries. In 1950-78, the annual mean growth rate of energy output was 11.9 percent. During that period of time, the annual growth rate of iron and steel output was 20.1 percent, chemical fertilizers 28.5 percent, caustic soda 17.6 percent, cement 17.2 percent. Second, due to the backward state of management and technique, especially the previous practice of developing small-scale industries which were great consumers of energy but low output producers (small-scale industries accounted for over one-half of all the industries put together), there was serious wasting of energy sources. Third, the serious imbalance of energy sources industries, especially coal and oil, affected the growth rate of energy sources. Fourth, lack of understanding of the seriousness of the rural energy sources problem, plus lack of effective measures. But, in essence, our country's energy problem is not the same as the energy crisis of capitalist countries. Our country has rich energy resources and does not have to depend on importation. Moreover, China's energy industries already have a certain foundation. So as long as we are willing to regard seriously the experiences of history as lessons to draw from, respect science, strictly adhere to objective laws, and make plans properly, it is entirely possible to solve China's energy problems and even try to do a certain amount of exportation by relying on our own resources and the concerted efforts of various sectors and regions.

2. Stress Development and Conservation While Giving Priority to Energy Conservation in the Immediate Future

China's overall policy toward energy sources is to stress development and conservation at the same time, while placing special emphasis on energy conservation in the immediate future. The philosophy behind this is twofold: First, there is not enough time to rely on development in the immediate future. In recent years, due to the country's limited capital resources, large-scale construction of energy sources was out of the question. Moreover, the period of construction for developing energy sources is long; generally, it takes 8-10 years for large-scale coal, electricity and petroleum projects to come into effective use. Thus, in the

immediate future, the growth of the national economy must rely mainly on energy conservation instead of placing hopes on development. Second, the utilization ratio of energy is being wasted. For example, in terms of ton steel comparable energy consumption, China consumes 1.6 tons of coal equivalent, and Japan consumes 0.77 tons. In electric power consumption, China used 2.7 tons. Japan used 1.2 tons. If we can attain Japan's level of consumption in these three aspects only, based on 1979's output, it will be possible to save tens of millions of tons of equivalent coal. Of course, this is impossible to achieve without undertaking any great changes. But it does reflect the tremendous potentiality of energy. China's utilization ratio of thermal energy is less than one-third; if the utilization ratio of thermal energy can be raised 1 percent each year, it is equivalent to saving 3 percent of the energy sources, i.e. increasing production by over 10 million tons coal equivalent. Thus, it is of great realistic significance to emphasize giving priority to saving energy in the immediate future. Third, the process of saving energy is actually the process of modernizing production and life. Everything is aimed at modernization, whether it may be changing or improving equipment, or improving production technology, or proper utilization of energy sources. Because of its significance, both the technical reform of the national economy and the great cutback in energy consumption constitute a long-term strategic task and an important step toward the realization of the four modernizations. Fourth, the energy sources industrial sector has the dual task of developing and conserving energy at the same time, but emphasis should be placed on development. Under permissible circumstances, the foremost task of the energy sources industry is to expand the scale of development and accelerate the speed of adjustment and construction progress.

3. Regard Energy Conservation as Central Point in Technical Transformation and Structural Reform

The practice of regarding energy conservation as the central point in the technical transformation and structural reform of the entire national economy is a major and important step toward materializing social modernization. The fundamental point of departure in energy conservation is to make all-around improvements in the utilization of energy sources, reduce energy consumption per product and per output value, obtain maximum economic results with minimal consumption of energy and thus attain the end of improving both production and the people's livelihood. There are numerous ways of saving energy. To approach the current problems, it is necessary to stress the following measures:

(1) Strengthen Control Over Energy Sources

The strengthening of control has always been an important way of saving energy. First, it is necessary to start from basic work, such as conducting useful general surveys on energy sources utilization, maintaining effective heat balances, establishing sound control systems to regulate energy consumption quotas, intensifying first-hand recording of energy sources utilization as well as metrological measurements and statistical analyses, etc. These are the necessary conditions for controlling energy sources scientifically. It is also important to make sure that such large energy consuming processes as heat treatment, casting and forging, welding, oxygen production, etc., should be properly controlled under centralized production management. For instance, by installing 2 heat treatment centers to

serve more than 80 factories, Nanjing City can save approximately 1½ energy sources. Great results in energy conservation can be achieved by earnestly popularizing this kind of experience. It is necessary to establish sound management organizations at various levels to control energy sources. Key enterprises which are large energy consumers (over 5 tons coal equivalent of the overall energy consumption) need special energy control setups with technical people specializing in energy sources management. Ordinary enterprises should have full-time or part-time specialists with expertise in the techniques and management of energy conservation. Besides enhancing energy sources management of the enterprises, the state should also establish related management systems. For instance, it is not only important to give consideration to such needs as energy consuming equipment, production of machines and tools, importation and distribution, but also the conditions of fuel supplying, and strictly adhering to the state's plan.

(2) Carry Out Technical Transformation Step by Step in a Planned Way

As the technical transformation of the national economy is the main direction of approach toward energy conservation in the future, it is imperative to concentrate our efforts in carrying it out. Our country is technically backward; most of the equipment is old, has poor efficiency, and consumes a lot of energy. For example, diesel and gasoline engines manufactured in this country consume 10-20 percent more diesel oil and gasoline than the advanced types of engines made in foreign countries. According to incomplete statistics, some 3.6 million tons of extra diesel oil and gasoline are consumed each year [by Chinese engines]. The efficiencies of China's water pumps and blowers are 10 percent lower than those made in foreign countries; the annual excessive electricity consumption amounts to 10 billion watts. There are now 180,000 boilers throughout the entire country, half of which are either outdated, old or both; their heat efficiency is so low that half of the coal is burnt and one-half is wasted; as compared with advanced type boilers in foreign countries, the amount of excessive coal consumed in a year amounts to over 60 million tons. Moreover, the currently used medium and low voltage generators which can produce 12 million kilowatts of electricity account for 29 percent of all thermal-power generators put together, and consume one-third more coal than large generating units; the excessive amount of coal in a year is approximately more than 19 million tons. Therefore, these are the problems that should be focused on when carrying out technical transformation.

First, emphasis should be placed on the renewal, modification and remodeling of major energy consuming equipment (e.g. boilers, generating units, combustion engines, cars, tractors, water pumps, blowers, compressors, electric motors, transformers, etc.), it is necessary to establish a uniform energy consumption standard for all kinds of equipment, machines and tools which will be issued and enforced throughout the whole country. The design or manufacture of any equipment, machinery or tool that use more energy than the standard consumption level will not be permitted; those that have already been approved for mass production must be remodeled within a certain period of time. Firm steps must be taken to stop the production of those which fail to comply with the remodeling regulations within the time limit, and thus enforce the remodeling requirements of the equipment. While the remodeling and modification of equipment will entail an enormous expenditure of capital funds; the production of new equipment will also require huge amounts of capital investment.

In close coordination with the renewal and modification of equipment, there must be development of centralized heating and combined utilization of heat and electricity in urban residential districts or areas where mining enterprises are concentrated and where they constitute stable heat loads. Generally speaking, by combining heat and electricity production, it is possible to enhance thermal efficiency from the current 30 percent level to over 60 percent, especially high temperature, high pressure, retropressure type generating units which produce even more remarkable results in energy conservation. Technology improvement and the use of new types of heat insulating materials are also important technical transformation projects.

It is imperative to strengthen scientific research on energy conservation so as to provide technical transformation with scientific basis and prepare the technical grounds for carrying out energy conservation work.

(3) Reform Economic Structure

To a certain extent, the economic structure of our country should be gradually changed from energy wasting to energy conserving in line with our country's concrete conditions. At present, most of our country's energy sources are used for heavy industries. In 1978, heavy industries accounted for 55 percent of the overall energy consumption, and the light industries accounted for 8 percent; but as far as the national revenue was concerned, the heavy industries accounted for only 29 percent while the light industries earned 18 percent. That year, there was a 4.6 times difference between the energy consumption rates of the two industries computed in terms of per hundred million yuan. It is estimated that the proportion of light industrial output value in the overall industrial output value rose from 41.6 percent of the corresponding period in 1979 to 45.5 percent; as a result, approximately 10 million tons of coal equivalent was saved. Due to the difference of product composition within the various departments of industry, the rate of energy consumption also varies. For example, the iron and steel ratio is 1.07:1 in China, and 0.7:1 in foreign countries; since the energy consumption of iron smelting accounts for 70 percent of the total energy consumption of the iron and steel industry, based on the current production level in our country, it is possible to save approximately 7 million tons of coal equivalent with each oil drop in iron and steel ratio. In view of the actual conditions in our country, it is possible to create even greater wealth for the society with the same amount of energy consumption by continuing appropriately to raise the proportion of light industries, and develop more departments of industry that consume less energy, produce greater output values and have concentrated labor.

Medium and small enterprises must undergo gradual technical transformation. Measures such as closing, stopping, merging or shifting must be taken against those large enterprises which contend for raw materials, hunger for fuel power, consume too much energy and can not be transformed at all.

(4) Utilize Energy Sources Properly

By properly utilizing energy sources in accordance with the characteristics of each kind of energy source and the specifications of each type of power consuming equipment, it is possible to make fuller use of the economic benefits of various kinds of energy sources. At present, the comprehensive utilization of energy

sources is poor and wasteful; most cities burn coal directly, thus encountering low combustion efficiency and serious pollution problems. The industrial and communication enterprises make very poor use of residual heat; there are quite a few places which merely generate electricity and do not supply heat at all in spite of the fact that they actually have suitable conditions for producing both heat and electricity at the same time. This means that the heat energy is not being fully utilized. Moreover, energy sources are not being properly distributed and utilized; a great number of coal varieties are being supplied to the wrong users. For example, a fly-high loss of 7 percent is incurred as the result of supplying railway locomotives with raw coal instead of lump coal. For best results, medium-size anthracite coal should be used in manufacturing chemical fertilizers; but, at present, since some 80 percent of anthracite does not go through washing or separation, the proportion of small lumps is quite sizeable and the lower size limit rate is high, thus resulting in 25-30 percent consumption increase. What is more, it is extremely uneconomical to use petroleum as fuel. The following measures are proposed to deal with these types of problems.

Substitute coal for oil; compress fuel oil; put stress on compressing various kinds of boiler fuel oils. Power station boilers, industrial boilers and civilian-use boilers which had been originally designed to burn coal but were subsequently converted into oil burners should all be switched back to coal burners in stages and batches within the shortest space of time; industrial boilers and civilian-use boilers which were originally designed to burn oil should likewise be converted into coal burners. Power stations which were originally designed to burn oil should be used as backups or peak regulators, and replaced by newly built coal burning equipment of adequate capacities. As far as production technology, product quality and combustion temperatures are concerned, there are no special requirements for oil burning industrial pit furnaces; but those which can be replaced by coal or coal gas should also be converted into coal burners in stages and batches.

Such inflammable gases as natural gas, liquified petroleum gas (LPG), coking furnace coal gas, etc. should be properly used. First of all, inflammable gases which are discharged into the atmosphere unused should be recovered chiefly for civilian use. As for inflammable gases which are already being utilized, except for those which are used as chemical industrial raw materials, efforts should be made to find out which of these fuels can be replaced and reserved for civilian use.

Proper utilization of coal for urban residents. First, cities with local coal resources should go into coal gasification for civilian use. The industrial cities should take positive steps toward utilizing residual gas, residual heat for civilian use. Places which do not have any such conditions now should stress molded coal processing; vigorously develop washing, separating and processing; improve quality; increase variety; supply according to needs of users and properly utilize coal.

(5) Adopt Economic Policy To Promote Energy Conservation

At present, the price of energy is universally far too low. In January-April 1980, the capital profit rate of major coal enterprises throughout the whole country was relatively low, and incurred fairly extensive losses, thus accounting for only approximately 17.5 percent of the mean profit rate gained by all the industries

throughout the whole country. In some areas, the price of electricity is on the low side, thus incurring extensive losses to the whole nation's heat supplying. Therefore, it is imperative to increase the prices of energy sources products at a suitable time so as to stimulate energy conservation. For those enterprises which exceed the state's quota on energy consumption, such measures as levying reasonable surcharges or taxes on excessive energy consumption should be taken into consideration. To those energy consuming organizations which adopt technical measures to conserve energy, the state should extend a certain amount of preferential treatment and aid in such areas as credit loans, taxation, financial subsidization, material supply, etc. A strict but fair reward and punishment system should be enforced in the energy conservation program; bonuses should be awarded to organizations and individuals who achieve outstanding results in energy conservation. Economic sanctions should be applied in serious cases of energy wasting. It is necessary to come up with a unified energy reward/punishment system.

(6) Promulgate Energy Conservation Decree

There should be legislation on energy conservation, and it is imperative to enact a series of energy saving decrees that can be strictly enforced; violations must be investigated and dealt with, thus seriously upholding the decrees.

Careful calculation and strict budgeting must be exercised in energy conservation, and comprehensive economic results should be stressed. Self-sufficiency and arduous struggle ought to be encouraged; positive efforts should be made to raise one's own energy conservation funds and use the funds sparingly. Overall consideration should be given to such factors as safety, environmental protection, people's lives, etc., and thus make all around arrangements and avoid giving too much attention to one thing and losing sight of another. It is important to stress chief regions, key enterprises and priority measures. At present, there are 6 major areas which account for over 60 percent of the nationwide total energy consumption, i.e., electric power production, metallurgy, chemical industry, construction material production, petroleum production and railroad. Approximately 50 percent of the total energy consumption comes from various kinds of boilers (including electric power station boilers, industrial boilers, civilian-use boilers and locomotive boilers). As far as the whole nation is concerned, it is especially important for major regions and industries to proceed with energy conservation. Each region and industry must focus on its own particular key point. Generally speaking, energy conservation measures should proceed from easy to hard, and from quick to slow. Planning should be enhanced in energy conservation work, and the key lies in making a long-range energy conservation plan that is scientifically well rounded. Departments and local places must be closely linked, e.g., the overall planning of centralized heating, combining heating with electric power, utilizing residual heat, etc. should be focused mainly on local places. It is necessary to formulate an energy conservation plan that can serve as a guidance, through close collaboration with the Planning Commission, Economic Commission, Construction Commission, Science & Technology Commission, Agricultural Commission, and Machinery Commission.

4. Give Priority to the Development of Coal and Hydropower

Our country is endowed with rich resources of coal and hydroelectricity, and the conditions for development of these resources are fairly good: there are over 64

billion tons of known reserves of coal, and the petroleum reserves hold excellent long-range prospects. As far as the makeup of energy sources is concerned, the proportion of coal will remain at approximately 70 percent from now to the end of the present century. Hydroelectricity is a cheap, clean and renewable source of energy which can be utilized forever. Thus, for a very long period of time from now and into the future, it will be imperative to give first priority to the development of coal and hydroelectricity.

Departing from the actual distribution of China's resources, the development of energy sources centers should be carried out in north China, northeast China, east China and the central south region where coal and thermal power are the primary sources of energy, as well as in the southwestern, northwestern and central south regions where hydroelectricity is the primary source of energy. Positive efforts will be made in oilfield exploration and exploitation, as well as preparations for building nuclear power bases. Vigorous efforts will be made in developing rural energy sources.

Coal: Put emphasis on exploiting Shanxi coal. Shanxi abounds in coal resources. It has a good assortment of high-quality coal. The deposits are shallow and the seams are stable, which makes it possible to develop coal with a low investment plus quick results. There should be a speedup of construction of coal mines in east China, and a build up of thermal power bases in this region. Energetically develop coalfields in the northeast region; carry out unified planning in the three provinces of northeast China and the three eastern leagues of Nei Mongol; build mines, open hearth pits and large thermal power stations in this region. Develop coalfields in the central and western portions of Henan; construct thermal power bases; expand the electricity power network in central China. Besides the preceding four regions, other regions should likewise develop oilfields selectively, build thermal power stations, and thus meet the local needs for coal and electricity. Shanxi, Guizhou and the western part of Nei Mongol should also develop coalfields as their transportation capacities are improved.

Hydroelectricity: Continue the construction of hydroelectricity base in the upper reaches of the Yellow River in the northwest region; build hydropower bases in the drainage area of Guangxi's Hongshui River, accelerate the development of hydroelectricity in the southwest region where the inexpensive hydropower resources will be fully utilized, and such power-consuming industries as nonferrous and rare-earth metals will be developed. The construction of two hydropower bases in Hunan and Hubei Provinces will be carried on, i.e. the West Hunan Project and the Sichuan-Hubei section of the Changjiang Project; besides the Gezhou Dam and Wuqiang River Hydropower Stations which are currently under construction, hydropower stations will also be set up in suitable locations. In the northeast, east China and north China regions, medium and small-size hydropower stations can be built in suitable locations so as to make the most of hydropower and thermal power which compensate and backup each other.

Petroleum: Strengthen geological exploration for oil. The oil reserves should be increased and expanded at the same time, and new oilfields should be developed.

Nuclear power: Nuclear power is an important source of energy, and should be developed along positive guidelines. At present, the installed capacity of

operational nuclear power stations around the world has reached 120 million kilowatts. Practice has proven that nuclear power is safe and dependable. Although it entails a larger investment than thermal power, it can generate electricity at lower costs as compared with thermal power. The development of nuclear power is also an important measure for making adjustments to offset the uneven distribution of energy resources and reducing the burdensome pressure of power transmission. At present, nuclear power can only be developed chiefly in areas which suffer from acute shortages of energy.

Rural energy sources: The development of rural energy sources is an urgent task. First, methane gas should be energetically developed; this constitutes an important direction. Second, plant forests of trees for rural firewood. Departing from the practical situation and in line with local conditions, allocate limited amounts of private plots and private hills to peasant households and encourage them to plant trees in vacant areas to produce locally some of their own fuel. Third, construct small coalpits and small hydropower stations in suitable places. These are the chief sources of energy in the rural area. While small coalpits and small hydropower stations which are not linked to a [power] network ought to be developed energetically, it is equally important to stress overall planning and real results.

Other energy sources: Our country is also endowed with rich resources of geothermal energy, wind energy and tidal-wave energy; and some regions have excellent conditions for utilizing solar energy. To develop such energy sources, scientific research is required, progressing from small to large-scale projects, and conducting experiments at the same time; the results should be gradually popularized in regions with suitable conditions.

In the course of developing energy sources, it is necessary to attach great importance to the coordination between the distribution of industries and construction of power sources. On the one hand, attention should be devoted to solving the energy shortage in economically developed areas in east China and the northeast territory where communication and transportation as well as the construction of electric power networks are to be enhanced. On the other hand, newly constructed energy-consuming enterprises should be placed as close as possible to energy source bases in the future, and energy-short areas should not be allowed to construct large-scale energy consuming enterprises such as ferroalloy, aluminum, calcium carbide, etc. so as to improve the coordination of energy production and marketing in those areas. To develop energy sources, the distribution of industries must be planned as a whole in coordination with communication and transportation, and efforts should be made to strike an overall balance so as to save investments, reduce transportation costs, cut down energy consumption, and thus obtain optimum economic results.

Our country's energy sources industry already has a sure foundation, but the overall technical level is still very low. Thus, it is necessary to step up the development and popular utilization of energy sources, and give full scope to the role of currently available energy science research organizations. Scientific research should focus on finding ways of developing and utilizing conventional energy sources. Our country's energy sources industries should be transformed and equipped with new technology as soon as possible. Moreover, great efforts should be put into scientific research work on new energy sources. For some time to come, coal will

remain as the chief constituent of China's energy consumption structure. Environmental pollution control and energy source transportation problems should not be overlooked. On the contrary, environmental protection and energy source transportation should be put on the main agenda of scientific research work. Moreover, a lot of effort should be put into research on coal gasification and liquefaction techniques, and ultimately transform the backward method of burning coal directly. In addition, serious efforts should be put into tapping the potentialities of energy sources industries as well as carrying out innovation, transformation and expansion, and giving full scope to the role of old bases. This way, it is possible to produce quick results with low investments.

In sum, the development and utilization of energy sources involve a very wide area and greatly affect the national economy and the well-being of the people. To reach the goal, we must seek common understanding, keep in step, and act in unison.

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ENERGY

STATUS, PROSPECTS OF CHINA'S COAL EXPLORATION TECHNIQUES OUTLINED

Beijing MEITAN KEXUE JISHU [COAL SCIENCE AND TECHNOLOGY] in Chinese No 4, Apr 81
pp 9-11

[Article by Fang Jie [2075 2212], board member of China Coal Society and deputy director of the Geological Bureau of the Ministry of Coal Industry: "The Status and Prospect of Coal Exploration Techniques in China"]

[Text] The foundation of energy sources for realizing our country's four modernizations lies in her rich coal resources. With the rapid growth of the coal industry and the fast improvements in coal production and technology, the requirements in coalfield geological exploration are becoming increasingly harder than ever. New problems, both in depth and scope, are encountered in the various realms of science pertaining to coalfield exploration techniques. To ensure rapid and healthy development of coalfield geology and exploration techniques, it is important to work in line with the actual geological conditions of coalfields in this country, and comply with the requirements of coal industry construction. Moreover, it is necessary to consider the current technical status of our country as well as the development trend of advanced techniques in other parts of the world.

Broadly speaking, the actual geological conditions of China's coalfields are: multiple geological ages of coal formation ranging from the Carboniferous to the Tertiary with one or two coal-bearing rock series in each age; wide coal series distribution, covering approximately one-eighteenth of the whole country's land area; great variation of coal grades and complete range of coal varieties. There are numerous kinds of sedimentary formations and geological structures. Moreover, in general, Paleozoic coalfields have relatively deep deposits with remarkable vertical differences and horizontal variations in the coal series and seams. These natural features also vary greatly between the southern and northern parts of the country; as a result, the specific geological conditions of China's coalfields are somewhat diversified. Thus, in order to attain the desired results in prospecting, it is imperative to adopt various kinds of geological exploration methods and means in line with local conditions.

Through nearly 30 years of geological exploration practice, striking developments have been achieved in all kinds of prospecting techniques, and a fairly large amount of experience has been gained, thus giving rise to a comprehensive prospecting method composed of a multitude of probing techniques that coordinate with one another. For concealed coalfields that have flat topographical features and

relatively favorable physical conditions, we have already mastered prospecting methods which combine ground geophysical surveying methods (i.e. gravimetric and magnetometric, electrical, seismic) with drilling and well logging; for exposed coalfields, a fairly good amount of experience has been gained in applying prospecting methods which rely on airborne topographic surveys and aerial geological mapping for guidance, and combine mountain stripping projects with exploration logging.

Our technical forces, survey teams, and capacity to manufacture equipment, drills, and geophysical instruments are quite adequate to support several hundred geological prospecting projects each year. In view of our country's coal mine production and construction needs, as well as the technical development trend in foreign countries, it is evident that we still need continuously to improve the accuracy of geological work, expand its scope of surveying work, and enhance the ability to solve practical problems. Various kinds of exploration techniques are being developed toward high quality, versatility, quantitative, microscopic and macroscopic, automatic [recording], series and digital techniques.

Following are some of the author's views on various subjects related to geological work, drilling, geophysics and the procedures of exploration work.

1. The ultimate goal of every operation in the geological exploration sector is to probe for mineral resources meeting certain quantity and quality specifications; and a geological report is the concentrated expression of the results of this particular kind of work. Thus, the quality of a geological report reflects the overall quality of the results achieved in a geological survey through various kinds of operations, disciplines and methods.

As proven by 3 decades of practical experiences, it is imperative to focus on high quality geological reports based on technically and economically sound exploration methods. To attain this end, first, it is necessary to do basic work including gathering and recording all kinds of firsthand information and make corresponding measurements and lab tests so as to obtain more scientific data which will enable comprehensive evaluation of the mineral production and thus bring our knowledge even closer to the objective facts. Second, process the various kinds of geological information and primary analytic data, and conduct comprehensive research on laws governing the natural occurrence of minerals, and how various geological factors contribute to their formation.

In recent years, many geological teams working in the comprehensive study exploration region have achieved encouraging results in such areas in the paleogeography of rock facies in the coal-forming period, research on structural features, and how they affect coal-bearing basins and rich coal zones, and probing into the variation patterns of coal metamorphism.

To improve the quality of geological work; in recent years, we have formulated and enforced certain standards for coal resources exploration as well as all kinds of rules and regulations on relevant techniques. Obviously, as the productive forces develop toward higher levels and are attested to in practice, after a certain period of time it will become necessary to make essential changes and additions in the standards and regulations.

Topographic surveys, engineering surveys, geological mapping, sampling and lab tests, measurements and tests, etc. all comprise the foundation of geological exploration work. From the viewpoint of development, both macro and micro operations are bound to develop in the direction of automatic [recording] and quantitative techniques. The application of mathematical geology and mathematical statistics in solving practical problems in various disciplines will become increasingly extensive. The application of aerial photography in surveying and geological mapping has progressed through a period of development to the present state-of-the-art which enables topographic charts with scales up to 1/10,000, 1/5,000-1/2,000 and corresponding geological mapping tasks to be accomplished by combining aerial pictures with field investigations. The application of satellite remote-sensing data in coalfield geological exploration is merely a beginning, and intensive efforts are being made to study and try out this new technology. The practice of relying on observation by the naked eye and qualitative descriptions in the identification and testing of coal and mineral ores is no longer suitable for the development of modern geological science, and it is necessary to move toward microscopic, quantitative and automatic recording, and gradually expand their application area. More testing methods and evaluation indices are needed for testing coal in laboratories; this will enable measurement and test work to become microscopic, integrated and versatile. Coal petrology is now further removed from the classroom and it has taken a new step forward in such application fields as the determination of coal metamorphism, separability, sedimentary environment, as well as coal composition and comparison.

For some time in the past, hydrogeology and engineering geology developed at a relatively slow pace. But through enrichment and development over the past 5-6 years, it is now possible to solve fairly complicated hydrogeological and engineering geological problems encountered in coal resources exploration. In the area of technical equipment, blowers are being gradually replaced by the introduction of deep well water pumps and submersible electric powered pumps. Moreover, we have also successfully developed flowrate loggers. Through practice, we have devised an engineering geological surveying system which can be used to determine the hard rock contents of large-scale open-pit mines. In the future, continuous efforts will be made to popularize the application of theories on unsteady flows and numerical values as well as computing technology which were developed in recent years. Efforts will also be made to gradually find means of exploring karst water at the bottom of coal formations and solving key technical problems such as water burst prediction, open-pit side-slope exploration, developing new and special instruments and equipment, etc. We will develop an effective system for exploring all kinds of coalbed hydrogeology and engineering geology, and come up with corresponding basic theories and new techniques.

With the ever expanding application of electronic computing technology, the quality and speed of work are bound to undergo fundamental changes.

2. At present, drilling and geophysical surveying are still the principal technical means of coalfield exploration both in China and other countries. In our country, exploratory drilling is even more important. As compared with other countries in the world which are involved in coalfield exploration, China is among those which operate the largest number of drills. In the 1960's, our drilling technique was not so far behind the level of advanced countries. Up to now, we still have a

fairly strong manufacturing capacity. At present, the key to improving drilling technique lies in our ability to use the equipment and techniques currently available in the country in an effort to improve drilling techniques and boring technology, strengthen basic work with emphasis on high quality and efficiency.

Percussion drills constitute the main body of drilling equipment. Our country began to develop percussion drills in ancient times, and we have now developed the fourth generation, i.e., hydraulic rotary power feed drills. Second generation drills (drive boring without vertical shaft) and third generation drills are mostly used in China's coalfield geological exploration system. Our country is currently developing and testing fourth generation drills which we have designed and manufactured by ourselves.

Through many years of practice, we have accumulated a great deal of effective technical experiences in coalfield drilling, including drive-shaft drilling technique, deep-bore hole technique, coreless boring, small diameter boring technique, alloy drill bit, pipe threader, and movable operating platform, as well as the recently produced truck-mounted cranes, artificial diamond bits, etc.

With the growth of modern probe drilling, further and continuous efforts are still required in carrying out research and development projects in such areas as long-life drill bits, cord-coring technique, hole-bottom drag bit replacement, and expansion drill bits, etc., as well as establishing series standards for drilling equipment and pipes. At present, there is an urgent demand for stepping up basic work in drilling technology, e.g. tests on the drillability of rocks commonly found in various kinds of coalfields in our country, and establishing unified indices; development and series standardization of drill bits for all kinds of rock formations; transformation of coring equipment and instruments for determining layers which are related to the rate of rock coal coring; improvements in drilling equipment and loading/transportation machinery....

The innovative development of probe drilling equipment and technology directly affects the speed and quality of exploration work. But how is it possible to develop a drilling techniques that is fairly adaptable and yet materialize series standardization at the same time in such a country as ours which has a multitude of geological teams, and a great variety of topographical and geological features? This is indeed a problem that merits in-depth probing.

3. The types of geophysical methods which are commonly employed in China's coalfield exploration are: logging, ground seismic prospecting, ground electrical surveying, gravimetric surveying and magnetic prospecting. Logging is used most extensively.

Since the beginning of the 1970's, European countries and the United States have begun to apply advance petroleum geophysical prospecting techniques in coalfield exploration. Broadly looking into the current international level, high resolution seismic techniques, channel wave seismic techniques, and digital logging techniques are the three cardinal indices for developing the application of geophysical techniques in coalfield exploration. Compared with the world's countries with more advance levels, China's coalfield geophysical exploration techniques are relatively inferior. As coalfield exploration develops toward the deep reaches of

concealed areas, and as the mechanization of coal mining excavation improves, it will become necessary to solve the numerous geological problems which confront coalfield geophysical exploration.

Coalfield Logging Technology: Our country began coalfield logging in 1954. As coalfield methods and technical equipment are constantly being perfected, striking improvements have been made in the capacity and precision of well logging in solving geological problems. Now it has become an indispensable method in coalfield exploration. Moreover, it has already begun to gradually develop from qualitative interpretation to quantitative interpretation.

Since the 1960's, full automatic photodot recorders have come into extensive use. Other successful developments include: 4-parameter simultaneous loggers composed of apparent resistivity, spontaneous potential, gamma and gamma-gamma combinations, and the extensive application of complete bore hole interpretation, graphic correlation, and hydrological logging techniques, which have thus helped to improve our ability to determine the stratigraphic division and thickness of coal beds, determine the structure of coal seams, and solve problems related to coal strata correlation and hydrogeology. In the 1970's, with the progress made in research and development work on new methods and new instruments, new developments are achieved in the comprehensive study of log data and graph correlation. The introduction of digital electrostratigraphy, supersonic imaging, digital tape recorder and flowlog/induction caliper combination instrument has helped to fill up the gap in our country's logging technique in recent years. There have also been some developments in the methods and contents of log data interpretation, and useful research has been conducted on the determination and correlation of rock and coal horizons and stratifications, thicknesses and structures, as well as fault points, sedimentary phases, cyclic structures, rock pressive strength, and the determination of ash contents in coal, etc.

Looking into the logging techniques of tomorrow, it will be necessary to research and develop further new methods and new instruments, such as acoustic logging and neutron logging, in order to solve more geological problems. All kinds of logging instruments will be subjected to quantitative calibration, and instrument graduation will be enhanced. To gradually realize the modernization of logging technology, efforts should be made to study and employ digital logging techniques.

Coalfield seismic survey techniques: Our country has been using this technique for 27 years now. In the beginning, photodot recorders were frequently used with the refractory survey method for marking out the basic rock morphology and the scope of coal series distributed beneath the overlying strata; now, the analog tape recorder is used extensively with the common reflection point method for multiple coverage operations. In regions with relatively favorable ground and physical conditions, it is possible to determine the thickness of overlying strata and the relief of the basements, and survey the geological structures—including faults with gaps measuring over 30 meters. The ground seismic method has become the chief means of coalfield geological surveying. Moreover, seismic survey technology is also developing toward digital technique, and, in recent years, the first-ever coalfield exploration digital seismic equipment has been developed. To improve the precision of seismic surveying, it will be necessary to develop new seismic techniques, such as ground high resolution seismics, inter-bore seismics and common-layer (channel-wave) seismics.

Coalfield electric logging prospecting technique: The electrical surveying method was first put to application in 1955 when it was primarily used for probing concealed coalfields. Subsequently, other methods were gradually introduced, e.g., electrical profiling, spontaneous potential field method, induced polarization method, and charging method, etc. By the 1970's, our country could design and develop its own bore hole radio perspective viewer, frequency depth prober. Now, it is already possible to use the electrical surveying method to map out the boundaries of concealed structures, trace the outcrops of coal seams in shallow overlying areas, probe the depth and distribution of coal series under overlying strata, and determine old pits and burning areas.

Digital technology is the trend of development in electrical surveying. Research and development projects on digital frequency depth probers are currently underway. Meanwhile, it is also necessary to expand the application range of electrical surveying, especially in general surveys for coal, regional prospecting, and coal production/exploration stages involving mining geology and engineering geology.

Gravimetric method and magnetometric surveying: Used primarily for surveying regional tectonic framework and igneous rock distribution; high precision gravimetric/magnetometric surveying can also be used for determining the scope of natural zones in coal seams and for studying small faults. In the south, some coalfields have achieved certain results in utilizing gravimetric detail survey data for determining the overlying thickness of red layers.

The application of any geophysical technique is limited by certain conditions. This is especially true in ground geophysical exploration which is often affected by such factors as ground surface conditions, excitation conditions in shallow layers, and physical conditions in deep strata. Thus, it is important to choose the appropriate method in a given location according to local conditions.

4. In order to speed up the construction of the coal industry and enable the country to achieve even greater results from its capital construction investments and currently available techniques and methods, it is necessary to make improvements in the procedures and methods currently employed in the basic construction of China's coal industry. Is it not conceivable to divide coalfield geological exploration work into two major stages—resource surveying and mine surveying?

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CSO: 4006/315

INDUSTRY

MEASURES TO DEVELOP SHANXI CONSUMER GOODS INDUSTRY EXAMINED

Taiyuan SHANXI RIBAO in Chinese 23 Jun 81 p 1

[Article by Zhang Baoshan [1728 1405 1472], Yang Guangyu [2799 0342 5940], and Song Liangtu [1345 5328 0956]: "Ways To Develop Daily Consumer Goods Industry in Shanxi"]

[Text] Recently, leading comrades of the central authorities have given instructions on the development of the national economy in our province, laying particular stress on the importance of developing consumer goods production and increasing the annual growth rate of consumer goods production by every conceivable means. As borne out by practice over the past 30 years, these instructions are fully in line with the objective requirements of industrial readjustment in our province and are directed against the long-time bad practice of the unbalanced development of industries over the past decades. The foundation for the production of daily consumer goods is quite weak and production development is quite slow in our province. Therefore, this link must be firmly grasped so that a coordinated growth of the national economy can be insured in our province.

Broadly speaking, daily consumer goods include all the kinds of material consumption necessary for the masses of the people to make a living. Like production consumption, it must be constantly made up; moreover, from the Marxist standpoint production consumption is conditioned in the final analysis by the consumption of daily necessities. But it is precisely this point that for various reasons was grossly overlooked for a long time in the past. Since the founding of the republic, the annual progressive rate of growth in purchasing power has reached 11.8 percent in our province, the highest nationwide. Last year's commodity buying power reached 5.6 billion yuan, and the per capita purchasing power was 18 yuan higher than the national average. However, commodities available for supply amounted to only 5 billion yuan, including industrial consumer goods, 50 percent of which were brought in from other localities. This being the case, vigorous development of daily consumer goods production in our province is an urgent necessity that must be met in order to satisfy the ever-growing material and cultural needs of both urban and rural people in accordance with the basic economic laws of socialism.

We are now carrying out industrial readjustment primarily to bring into line the economic proportions that have been thrown out of balance and change the irrational economic structure into a rational one.

Shanxi is an important base area of our country and its heavy industrial structure has historical reasons, but practice has proven that the existing industrial structure is unfavorable both to all-round stimulation of the provincial industry and to the development and construction of an energy base itself. Over the past 30 years since the founding of the republic, the proportion of light industry in the gross provincial output has dropped to 28 percent from 48 percent recorded in the rehabilitation period, while that of heavy industry has risen from 5 percent to 72 percent. The per capita output of light industry in the province is now only 139 yuan in value. Initial readjustment was carried out last year when the principle of "six preferences" was maintained in the development of the light industry, and the production of 37 items of major consumer goods including bicycles and sewing machines was undertaken, with the result that the growth rate of light industry rose to 31.29 percent. The products and output increased, the variety of designs and colors increased, the quality improved, and the pace ahead was speeded up. This shows that to continue to grasp the link of developing daily consumer goods production and to gradually push the metallurgical, machine-making and chemical industries to serve the light and textile industries will make the economic readjustment go forward in a rational direction.

The advantages of developing the light and textile industries--less investment, quick returns, source of increased revenues and profits--have always been generally recognized. On the other hand, viewed from the reality of our province, the production of more good quality and inexpensive consumer goods will withdraw money from circulation, cut down the issue balance, and effectively bring the ever-increasing circulation of money and currency outflow under control. The amount of money in circulation on the provincial market is constantly higher than the quantity of available commodities, and currency outflow to Beijing, Tianjin, Shanghai and other provinces and municipalities accounts for 77 percent of the absolute issue balance. In normal circumstances, such a huge amount of outflow should be a factor stimulating the development of consumer goods. But for a long time it has been a millstone around our neck, affecting tax revenues and profits and the capacity for enlarging reproduction. The positive measure for resolving this contradiction is still to rely on the development of consumer goods production in our province.

In the course of industrial readjustment over the past 2 years, a number of districts and departments have gained many good experiences and found many good methods to develop consumer goods production. These experiences and methods are worthy of being summed up and popularized by us.

First, the road to specialized cooperation and combination centered on famous-brand and major products. We may begin with famous-brand products and organize existing industrial structure and according to specialization planning. The combination may assume various forms. In substance, the combined enterprises may concentrate on any of the following lines: developing products, carrying on technological and technical cooperation, processing raw materials through cooperation, raising funds, operating and circulating, and providing services. In extent, the combination may be close-knit or loosely woven and may be overall, single-phased, or overlapping. Or else, on the principle of specialized cooperation and economic rationality, enterprises may be readjusted and formed into specialized companies of various types; or within a municipality or an area, several plants producing similar products and cooperating closely with one another may be combined into a general plant with one major plant as the backbone or formed into "one continuous line" of production. In light of the

conditions of our province, it is desirable to start with combining enterprises within the light and textile industries that are in the same localities, such as the Changzhi Bicycle Industrial Company and the Changzhi Sewing Machine Industrial Company. This is conducive to stable and dependable relations in a combination, insuring production coordination and balanced production, and increasing the rate of accessories production. It also benefits the elaborate division of labor among various enterprises and promotes raising the level of specialization. Later, we should organize combinations cutting across trades, departments, areas, provinces and municipalities and combinations between industry and agriculture and between town and country. For the present, we should mainly undertake the combination and cooperation with regard to transistor radios, TV sets, clocks and watches, washing machines and industrial sewing machines and, on the basis of studying the advanced experiences of Shanghai and other fraternal provinces and municipalities, go a step further and make the technical cooperation a success between the Changzhi Sewing Machine Plant and Shanghai Sewing Machine Plant No 1, between the Changzhi Bicycle Plant and Shanghai Bicycle Plant No 1, between the Shanxi Radio Plant and Shanghai Radio Plant No 4, between the Yangquan Watch Plant and the Shanghai Watch Plant, between the Shanxi Textile Mill and Shanghai state-operated cotton mills Nos 13 and No 15, between the Yanbei Porcelain Plant and the Tangshan Porcelain Plant, and between the Taiyuan Porcelain Plant and the Jingdechen Porcelain Plant in Jiangxi, in order to improve product quality, increase the variety of colors and designs, expand production capacity and more quickly increase the production of consumer goods urgently needed by people.

Second, the road to tapping the latent power and carrying out innovations and transformations centered on expansion of production capacity. This is the way to speed up development of the light and textile industries and to increase the capacity for producing daily consumer goods. The existing light industry and textile industry enterprises in Shanxi have great potential. The latent power of old enterprises has not been brought into full play, as manifested in the following: 1) Most of the equipment in our light and textile industries was produced in the fifties, and a small part was produced in the thirties and forties. In order to modernize the variety and quality of products step by step to meet market demands at home and abroad, it is imperative to renew and remake this old equipment systematically according to plan. Some equipment is comparatively recent, but due to the low technical level and the poor foundation of management, has not reached its designed capacity even to this day, leaving still more latent power to be tapped. 2) Over the past 30 years and more, the enterprises in our light and textile industries have built up "technical resources"--large numbers of college graduates trained in practical work, self-taught technicians, and veteran workers rich in practical experience. These "technical resources" have not been fully tapped. 3) Manifested in economic results, labor productivity is low, profits are small, and utilization of funds is poor. Take labor productivity, for instance: the material and technical equipment in our light and textile industries is not compatible with labor productivity. The labor productivity of personnel in Shanxi's light industry was 11,750 yuan in 1979, the 24th place nationwide and 68.5 percent of the national average. If labor productivity can reach the national average, the output value can be increased by 1 billion yuan a year. If it can reach the Shanghai level, the output value can be increased by 4 billion yuan. The labor productivity of personnel in Shanxi's textile industry was 10,835 yuan, the 19th place nationwide and 58.6 percent of the national average. If it can reach the national average, output value can be increased by 1.73 billion yuan. This shows that a great deal can still be accomplished by tapping the latent power and carrying out innovations and transformation in our light and textile industries.

Considering the fact that the financial resources of the state are still quite strained, it is not possible to spend a lot of money to tap the latent power and carry out innovations and transformations in the light and textile industries. Therefore, we must act in accordance with our capabilities, proceed in an orderly way and step by step, pay great attention to economic results, and use our limited financial and material resources to fill the gaps in production of products that are in short supply on the market, to upgrade and change products, to improve product quality and increase the variety of colors and designs, and to conserve energy and cut down the consumption of materials. For example, the funds for tapping the latent power and carrying out innovations and transformations in the textile system should be used mainly for the purpose of renewing and remaking the equipment of existing knitted goods plants and filling the gaps, for the purpose of adding combing equipment, wide looms for making medium-length and long fabrics to meet market demand, and wide cloth and color fabrics. If funds are used for these "essential" purposes, then a capacity for producing 5 million meters of medium-length and long fiber cloth can be established after transformation, and 11 small yarn-dyed fabrics factories can be developed in the direction of producing light weight and thin fabrics. For another instance, if the first light industry succeeds in implementing certain technical measures centered on improving the quality of famous-brand products and products that are in short supply and on the expansion of production capacity, the Taiyuan and Datong breweries and the local famous-brand wine projects can round off the work and establish a capacity for producing 500 tons of aluminum foil paper for cigarette factories and 1,200 tons of baby foods, solid haw drinks, and canned foods. If the projects financed with the funds arranged to tap the latent power and carry out innovations and transformation in the light and textile industries are properly managed and used, they will form a capacity which is expected to increase output value by 370 million yuan, profits by 34 million yuan, and taxes by 29.5 million yuan. The production capacity can be expanded and economic results improved.

Third, basing ourselves on local resources and establishing a stable raw materials system and a raw materials base. In developing consumer goods production we should first rely on diversification of agriculture for raw and processed materials and second on heavy industry for providing raw materials products. In addition, when necessary we may bring in some materials that are in short supply. In this spirit we should base ourselves on local resources and construct a dependable raw materials base. In fact, if 900,000 mu of cultivated land is set aside in Shanxi to develop sugar-bearing crops and tobacco leaves, we can produce 50,000 tons of sugar and 400,000 cases of cigarettes without adversely affecting grain production, while at the same time we can increase the peasants' income and state revenues. The metallurgical and chemical industries, too, should make efforts to provide the light industry with quantities of good-quality raw and processed materials that are up to standard, while speeding up their steps of readjustment. For the present, they should meet as quickly as possible the urgent demand for strip steel and sheet metal necessary for the light industry, and the chemical department should meet the urgent demand for soda ash and caustic soda. This is necessary not only for the development of consumer goods production but also for finding a way out for these departments. It should be borne in mind that the consumer goods industry is itself a processing industry which cannot produce without materials. With the demand for daily consumer goods constantly rising, the demand of the light industry for raw and processed materials from heavy industry will be showing an upswing. How to act as a go-between, guide the water to the channel and keep establishing and perfecting the raw and processed

materials systems between consumer goods production and other departments is a problem that needs to be thoroughly studied, considered and solved further by all those who are interested in the development of consumer goods production.

Fourth, strengthening leadership and encouraging all trades to aid consumer goods production. First, leadership in industrial adjustment should be strengthened. Over the years, whenever a contradiction has arisen between heavy industry and light industry regarding funds, power, fuels, and materials, it was always heavy industry that was "insured" and the light industry that was "pushed aside" whatever the issue. Take capital investment, for example. Viewed from the standpoint of industrial investment over the past years since liberation, light industry has accounted for only 7 percent of the total industrial investment. This has brought about a situation in which the heavy industry is getting ever "heavier" and the light industry ever "lighter," and has brought about a severe imbalance in the proportionate relations between the two major categories of social reproduction. In the process of readjustment a task of top priority is to bring heavy industry from the path of "a closed circle" to the orbit of serving agriculture and light industry. At the same time, the product structure and organizational structure of the light and textile industries themselves should be properly readjusted, and both production of high-grade products that get more income and production of popular products urgently needed by the people should be firmly undertaken.

In order to strengthen leadership over the production of daily consumer goods, it is also necessary to organize coordination between the various branches of the national economy and to encourage all trades to aid the development of daily consumer goods production. Leading bodies at all levels should effectively grasp the change of product structure and adjustment of the direction of service in heavy industry, particularly in the metallurgical and chemical industries, and should strive to provide quantities of good-quality and raw and processed materials that are up to standard for developing consumer goods production. The force of heavy industry and, in particular, the equipment and processing capacity of the machine-building industry should be reorganized according to plan, and everything possible should be done to provide more and better technical equipment for the development of consumer goods production and to help the consumer goods industry carry out a technical transformation and raise its levels of production, technology and management. As in Shanghai and Tianjin the vacant plant buildings and idle equipment in heavy industry should be readjusted and the light and textile industries should be helped to stretch the goods in short supply, fill the gaps and develop famous-brand products. At the same time, the enterprises in the munitions industry should be organized to launch an army-people program to trial-manufacture and produce consumer goods. On the principle of "six preferences" for the light and textile industries, all departments concerned should arrange the necessary funds, supply goods, link production to marketing, open the channels between supply and demand, conduct market survey, and strengthen market forecast. The objective is to insure that the quantity of daily consumer goods maintained in society does not reach a saturation point. In addition, from the Marxist point of view that social production presupposes three essential factors—means of labor, objects of labor, and laborers—the means of labor necessary for the light and textile industries are conditioned by heavy industry, the objects of labor necessary are to be supplied by industry and agriculture, and the laborers necessary are to be provided and trained by the labor department and departments of science, technology and education. This shows that only when all branches of the national economy

switch to the orbit of aiding consumer goods production and create conditions for the light and textile industries can the pace of producing daily consumer goods be speeded up.

Speeding up the development of consumer goods production is a glorious and pressing task confronting us. There are many difficulties, but there are more numerous favorable conditions. If we firmly implement the line and policies laid down at the Third Plenum, exert great efforts, show great proficiency, correctly handle the internal connections in the production of daily consumer goods, correctly handle the external horizontal and vertical connections, concentrate forces, and grasp the Taiyuan, Datong, Yangquan, and Changzhi municipalities which account for 60 percent of the total output of the light industry, then production of daily consumer goods will certainly achieve rapid and good progress and development in the course of readjustment.

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DECENTRALIZATION OF EXPORT TRADE URGED

Guangzhou GUANGZHOU RIBAO in Chinese 28 Jun 81 p 4

[Editorial by Xie Wei [6200 1919] entitled: "Export Business Should Be Decentralized"]

[Text] Last Sunday I dropped in on a friend who works in a provincial foreign trade corporation and just as I started talking about some provincial corporations which as yet are unwilling to decentralize export business down to local and municipal corporations, he, in one breath and with a heavy heart, set forth numerous "reasons" why decentralization couldn't be.

To sum it all up, he had three "reasons": A lot of commodities require a so-called coordinated transaction, and it is necessary to comply with the principles of unified pricing, market arrangements, and customer usage. If more than one entity transacts the business then "unification" would not be easy; there are a lot of new personnel in municipal corporations who have little experience and do not take enough care; and if local and municipal corporations demand to transact their own exports, the provincial corporations will have no commodities to export. Wouldn't that be "closing down for good?"

Pardon me for impolitely stating that this is very near being a "Chicken Little." In the final analysis I fear that it's that there is not accurate understanding for the following three "relationships".

The first relationship is one which gives play to local enthusiasm with centralized unity. The policies of foreign trade naturally require centralization. The goals are expansion of the market and sales at a good price. Also this one point must be made, the problems discovered when local and municipal foreign trade corporations directly conclude export transactions and have an intense grasp of foreign market demand are immediately solved through local party leadership, affirming the benefit of this method over handling through provincial corporations. Not only is this the case, but it can also give full play to the local and municipal enthusiasm in the areas of storage, transportation, banking, etc. It also omits the allocation link from municipality to province. The speed of exports and exchange settlement is far faster than when done by the provincial corporations themselves. Furthermore, foreign transactions emphasize concentrated centralization pointing out the policy level centralization, that being the "three centralizations" of price, market arrangement, and customer application. Only after provincial corporations are decentralized can the control methods of the "three centralizations" be perfected, strengthening supervision of the local and municipal corporations. This will not only implement policy on centralization but can also make business better and more lively.

The second relationship is one between those unfamiliar with the business and the skilled. The unfamiliar and skilled of the so-called cadre operations can only be transformed through practice. Recall that in the early 1950's the provincial foreign trade corporations were just established and the majority of cadre were transferred in from business departments and units. Through more than 20 years of practice, many of them have become "foreign trade specialists." There are a lot of cadre in present local and municipal corporations who have worked in foreign trade for more than 10 years, not to mention that there is also a continuous influx of many specialists who have graduated from foreign trade schools. For this reason, only if the provincial corporations provide more guidance can they take up this secondary responsibility.

The third is the relationship between the upper level corporation and the basic level corporation. There should be a difference in the duties of provincial foreign trade corporations and the local and municipal basic level corporations. In addition to managing its own portion of specific business, the provincial corporation should place its primary emphasis on policy guidance and management of the local and municipal basic level corporations and not mainly on the handling of specific business matters like the basic level corporations, otherwise, they will be unable to play the leading role of a key department. The key departments of foreign businesses do extremely detailed research of the economic trends, international finance, and product demand of every country. Thus, they are able to insure the expansion of foreign sales and overwhelm their competition. As for internal administration, continuous attention is given to improving management, raising work efficiency, and to increasing economic results, so as to guide the affairs of the business. If our provincial foreign trade corporations were also able to decentralize the majority of export business down to local and municipal corporate management and to increase their research and guidance role, then their duties would be extremely strenuous and there would be no talk of "closing down for good."

In March of this year, the provincial foreign economic conference made a decision to give priority to developing the foreign trade of the city of Guangzhou and asked provincial level corporations one after another to pass the conclusion of export business down to municipal corporations. This was an energetic measure to quicken the expansion of the foreign trade of our province. However, only if it is unanimously implemented. I hope those heavy-hearted comrades will liberalize their thoughts, broaden their vision, and make a contribution to the great expansion of the foreign trade of our province.

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CONTINUALLY RISING LIVING STANDARDS FOR WORKERS REPORTED

Shanghai WENHUI BAO in Chinese 2 Jul 81 p 1

[Communique from the Beijing bureau by Qiao Quan [0829 6692]: "Constantly Rising Living Standards for Workers and Staff Following the Founding of the People's Republic"]

[Text] Data recently supplied by the Institute of Economic Research of the China Academy of Social Sciences shows that in the 33 years since the founding of the People's Republic and along with the development of production, the living standards of the vast workers and staff of our nation have continually increased.

This report by the Institute of Economic Research, entitled: "Seeing the Superiority of the Socialist System Through the Continually Improving and Rising Living Standards of our Workers and Staff", points out that from the beginning of the People's Republic to the end of the first Five-Year Plan, the productive forces of our society developed rapidly and the people's living standards advanced apace. Later, our work developed some deviation, particularly during the 10 years of internal disorder, exhibiting vast political upheaval, seriously harming the productive forces of society, and hindering the improvement of the people's lives. However, in sum, following the expansion of production, the lives of our workers and staff still showed distinct improvement. According to 1980 studies of 86,955 households of workers in Beijing, Shanghai, Tianjin, Wuhan, and 44 other cities, the monthly cash income is 42.8 yuan, calculated on the average family population. This is 1.1 times greater than 1964. After discounting for inflation factors, the actual living expense income still increased 68.8 percent, a yearly average increase of approximately 3.3 percent.

It can also be seen from this data that in over 80 thousand worker households, the proportion of high income households rose to a great extent and the proportion of low income households dropped to a great extent. Of these, households with monthly incomes of 35 to 50 yuan, when calculated on average family population, increased from 5.8 percent in 1964 to 36.8 percent; and households with incomes below 15 yuan dropped from 32.8 percent to 1 percent. What a gratifying change!

The primary reason for the clear increase in living expense income for worker households was the clear increase in the number of employed persons in worker families. In 1964, each worker household averaged 1.6 persons employed and in 1980 this figure increased to 2.35 persons. In addition, in recent years, due to resolute implementation of planned parenthood, the average population per household declined. Employment grew, family size decreased and the burden decreased. Furthermore, in

recent years, workers' wages have also improved and there have been increased bonuses and some allowances with the average income of worker families exhibiting a corresponding increase.

From the results of this survey it can be seen that the average living expenses and the structure of those expenses for workers have both shown a fairly obvious change. In a comparison between 1964 and 1980, the total food expenses for worker families increased 63.3 percent. However, the proportion showed a relative decrease of 8.8 percent. The proportion of income in fuel expense also showed a relative decrease of 2.5 percent. The expenditures for clothes, daily necessities and entertainment actually increase 9 times. This is forceful evidence of the improvement in the worker's living standards.

The number of people possessing medium high grade durable consumer goods amongst the workers also increased steadily. At the end of 1980, 127 bicycles, 66 sewing machines, 85 radios, 32 television sets, 22 electric fans and 5.4 record players were owned by 100 average worker households.

The above survey data also did not include public medical services, rent allowances, in kind awards, and other non-cash income. The system of free medical services, financial assistance, and pensions for our workers can be called the ultimate social insurance. It allows the workers to have no fears of birth, old age, sickness, or death.

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STATE SUBSIDIES ON CONSUMER SPENDING DESCRIBED

Beijing CAIZHENG [FINANCE] in Chinese No 7, 5 Jul 81 pp 27-28

[Article by Beijing Municipal Planning Committee: "How Does the State Subsidize Consumer Spending?"]

[Text] The wage system in force in our country is a low wage system. In recent years the party and government have taken a series of measures like adjustment of wages, granting nonstaple food subsidies, and restoration of the bonus system to raise the level of workers' wages. This is obvious to all. But, in addition to income items that are in the nature of wages (including bonuses and allowances), the state spends a lot of funds to subsidize the people on consumer spending. This is often not so apparent to many of our comrades. With a view to studying comprehensively the way the people have increased consumer spending and improved their living standard, we have recently collected some data on how the state subsidized consumer spending for the people of Beijing during 1980. We have made a preliminary analysis of this data. Our findings are roughly as follows:

It is preliminarily calculated that the number of employed in the municipality had a per capita wage income of 880 yuan in 1980, averaging 560 yuan per capita for the total population of the municipality. According to incomplete calculation, the expenses defrayed by the state through various channels to subsidize consumer spending by the people averaged 400 yuan for each of the urban population. Put together these items gave each one of the urban residents an actual income of 960 yuan. At present, the number of employed and the number of retirees (with fixed income) in our municipality account for 70 percent of the urban population (in capitalist countries in general, the number of employed account for about 30 percent of the urban population), and the living standard of the people has much improved.

There are four different funds used by the state to subsidize the people's consumer spending:

1. Allowance for the difference between purchasing and selling prices of basic necessities of life. Policy-related subsidies for grain, edible oil, meat, eggs and vegetables and for coal for civil use totalled 400.67 million yuan, averaging 78.6 yuan per capita of the urban residents. This does not include the reasonable profits on handling these commodities. Actual benefits enjoyed by the urban residents would be much greater if these profits were taken into account.

2. Housing allowance. As a rule, house rentals paid by urban residents should include house depreciation (calculated on an average of 50 years), house repair expenses, and housing service expenses. At the end of 1980, housing for residents totalled 49 million square meters in the municipality. If the above expenses and depreciation were taken into account, 347 million yuan in house rentals should have been collected. House rentals now collected by various management departments amount to only 37 million yuan (equivalent to only half of the house maintenance fees), and state subsidies amount to 310 million yuan or 90 percent of the house rentals that should have been collected. On average each resident gets an allowance amounting to 61 yuan. To be sure, as housing levels are not even, those households occupying less living space get a little less allowance than those occupying a little more.

3. Cultural, educational, and health spending. It is preliminarily calculated that cultural, educational and health spending in the municipality totalled 985 million yuan (excluding rural outlays) during 1980. The total includes 415 million yuan in educational spending (including educational costs, depreciation and maintenance expenses on schools), 310 million yuan in health service spending (including free medical service), 80 million yuan in cultural and physical culture spending, 180 million yuan in costs of running nurseries, kindergartens and other collective welfare projects. Benefits averaged 193 yuan per capita.

4. Public utilities expenditures. Municipal expenditures on urban maintenance (including roads, water supply and drainage, gas and thermal power, electricity, communications, gardening, afforestation, environmental protection) and depreciation of public facilities totalled 351 million yuan in 1980, averaging 69 yuan per capita of the urban population. Some of these costs have less direct bearing on each resident but are defrayed for the benefit of all urban residents.

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